



Economic Research Service
U.S. DEPARTMENT OF AGRICULTURE

Economic
Research
Service

Administrative
Publication
Number 111

February 2023

SELECTED CHARTS FROM
AG AND FOOD STATISTICS
CHARTING THE ESSENTIALS
FEBRUARY 2023





CONTENTS

	Ag and Food Sectors and the Economy	4
	Rural Economy	6
	Land and Natural Resources	9
	Farming and Farm Income	11
	Agricultural Production and Prices	14
	Agricultural Trade	17
	Food Consumption and Availability	20
	Food Prices and Spending	23
	Food Security and Nutrition Assistance	25



Stay up to date with our entire collection online at <https://www.ers.usda.gov/essentials>



USDA's Economic Research Service (ERS) conducts high-quality, objective economic research to inform and enhance public and private decision making on emerging issues in agriculture, food, the environment, and rural America.

Ag and Food Statistics: Charting the Essentials covers key food and agricultural indicators and illustrates the scope of ERS's work through a series of charts and maps. This booklet provides a sample of those maps and charts available on the ERS website at www.ers.usda.gov/essentials.

Organized into nine topics, ***Charting the Essentials*** anticipates questions, such as: How much do agriculture and related industries contribute to the U.S. economy? What economic forces are shaping rural America? What are the top destinations for U.S. agricultural exports? What percent of income do U.S. households spend on food?

Charting the Essentials provides a resource for public officials, researchers, educators, students, journalists, and anyone looking for current information on these topics.

Visit the ERS website where you can view and download these charts and maps, as well as a variety of reports and other products, such as *Charts of Note* and *Amber Waves* online magazine.

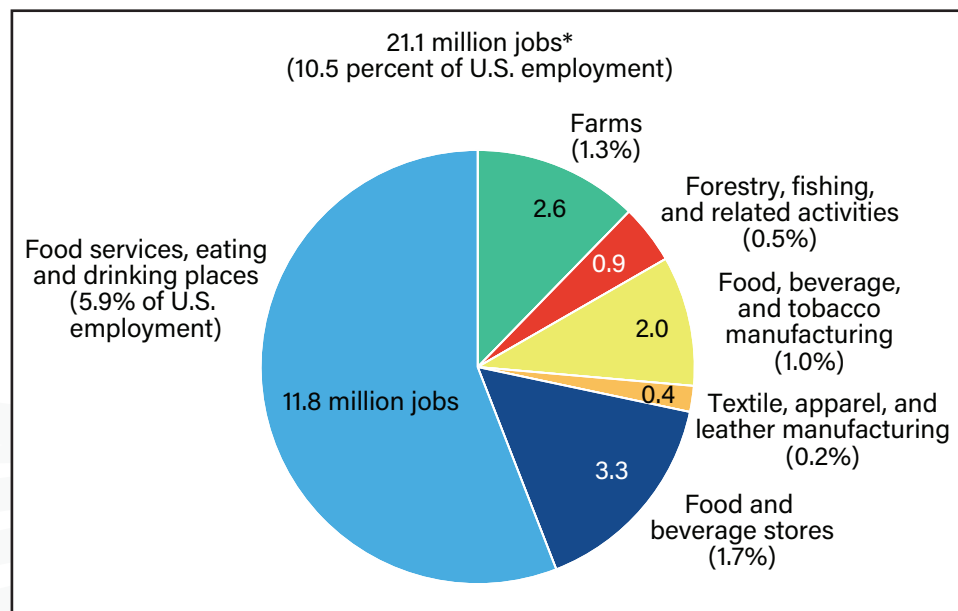


AG AND FOOD SECTORS AND THE ECONOMY

The U.S. agriculture sector extends beyond the farm to include restaurants, food manufacturers, and food stores.

Agriculture and its related industries account for 10.5 percent of U.S. employment ...

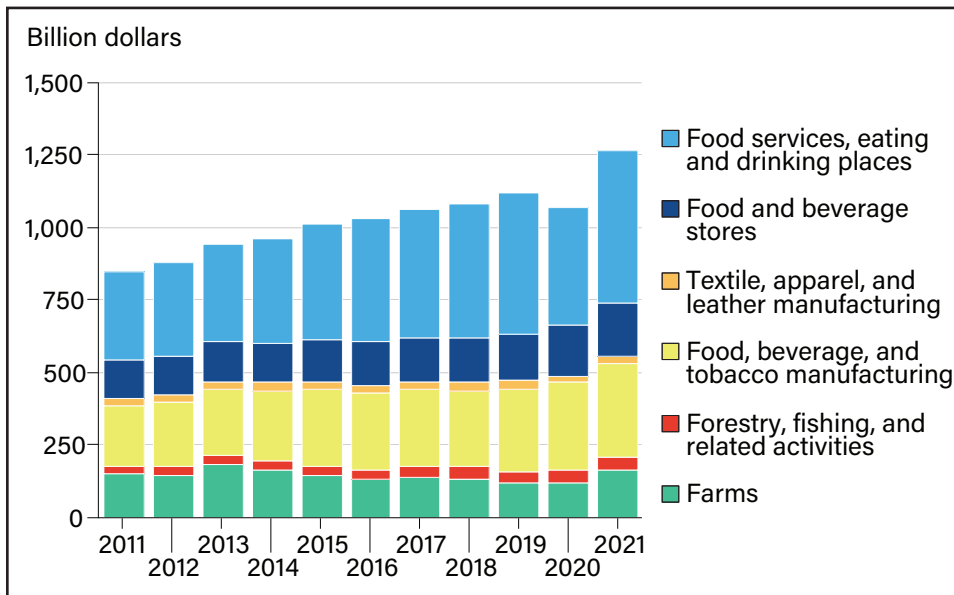
Employment in agriculture, food, and related industries, 2021



*Full- and part-time jobs. Categories may not sum to total because of rounding.
Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of Economic Analysis (SAEMP25N), as of September 30, 2022.

... and 5.4 percent of U.S. gross domestic product (GDP).

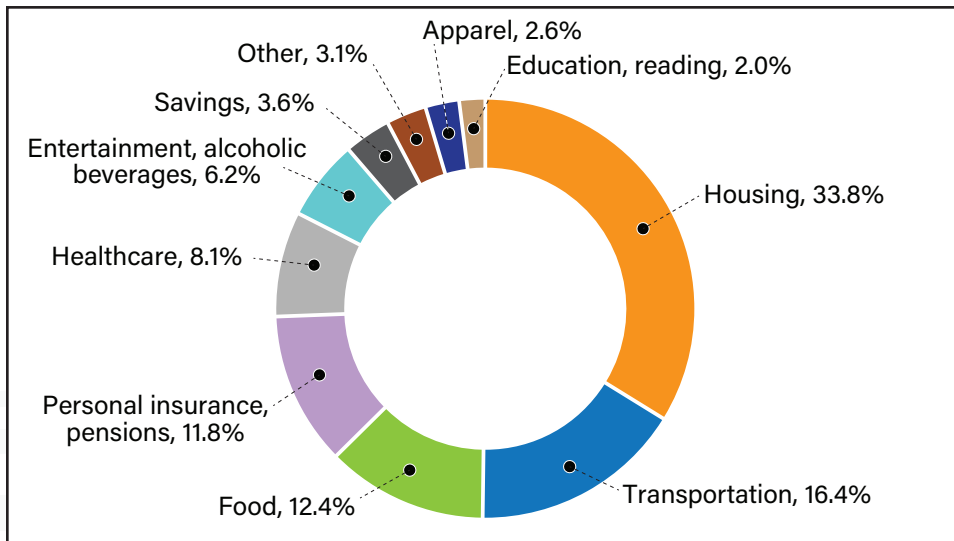
Value added to U.S. GDP by agriculture and related industries, 2011-21



Note: GDP = Gross domestic product.
 Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of Economic Analysis, Value Added by Industry, as of December 22, 2022.

Food ranked third behind housing and transportation in U.S. households' expenditures in 2021.

Share of U.S. household consumer expenditures by major categories, 2021



Note: "Other" includes personal care products, tobacco, and miscellaneous expenditures.
 Source: USDA, Economic Research Service using U.S. Department of Labor, Bureau of Labor Statistics, 2021 Consumer Expenditure Survey data.

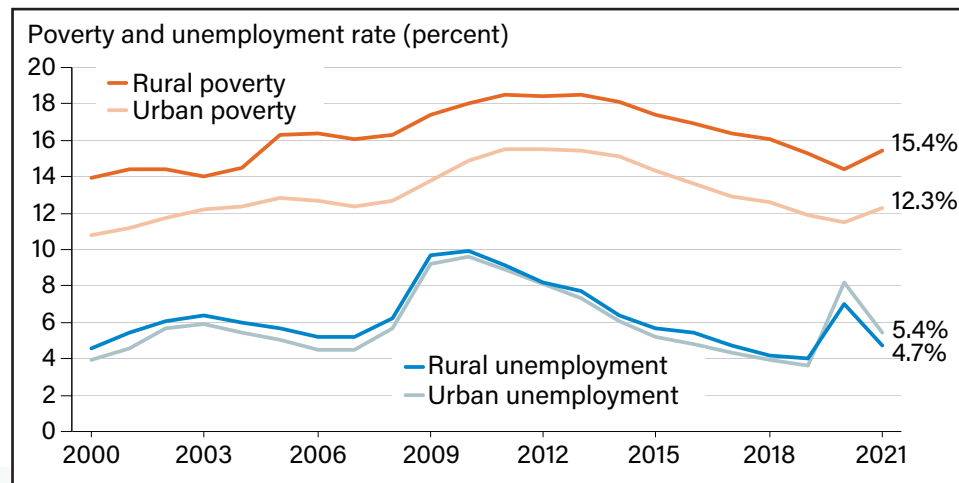


RURAL ECONOMY

Rural unemployment rates were lower and population growth stronger than in urban areas during the COVID-19 pandemic, but poverty rates remained higher in rural areas. Despite overall rural population growth from 2020 to 2021, population change varied across rural America.

The gap between rural and urban poverty rates persists.

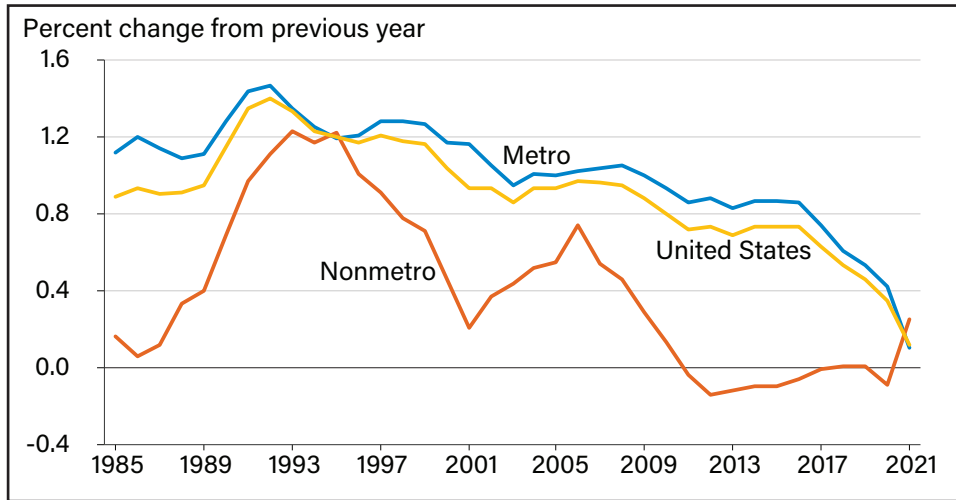
U.S. rural and urban poverty and unemployment rates, 2000-21



Note: Rural/urban status is based on 2013 county nonmetro/metro delineations as determined by the Office of Management and Budget.
Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census (poverty) and U.S. Department of Labor, Bureau of Labor Statistics (unemployment).

Losses to rural population reversed in 2021...

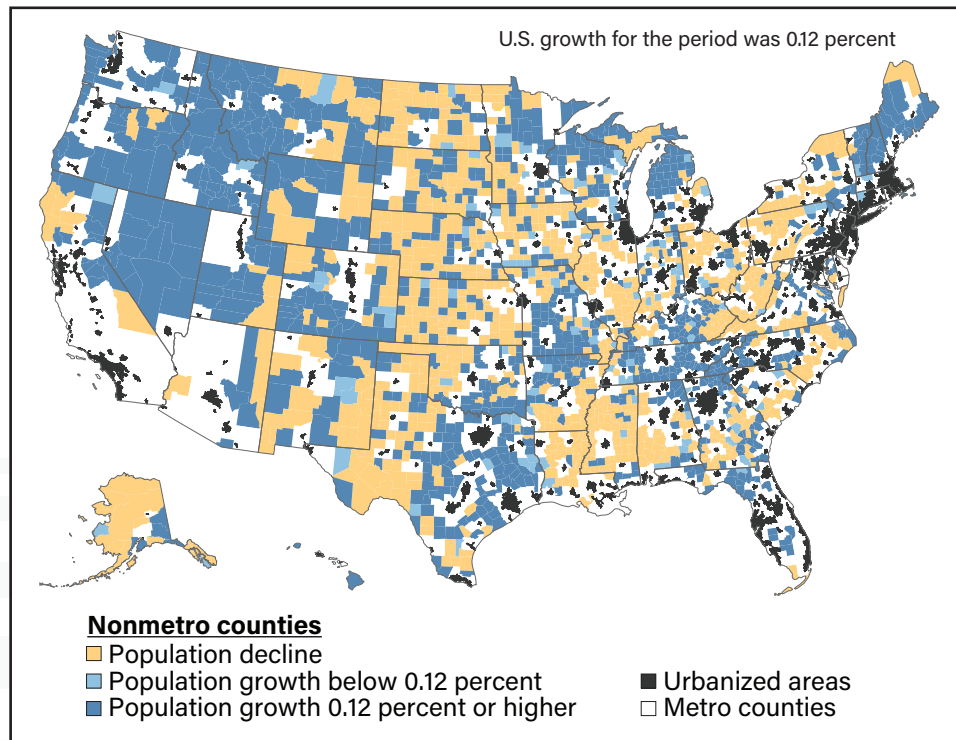
U.S. population change in metro and nonmetro areas, 1985-2021



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, county population estimates. Data for 2010-2020 are provisional estimates and do not reflect 2020 Census counts.

... but this varied across the United States.

U.S. nonmetro county population change, 2020-21

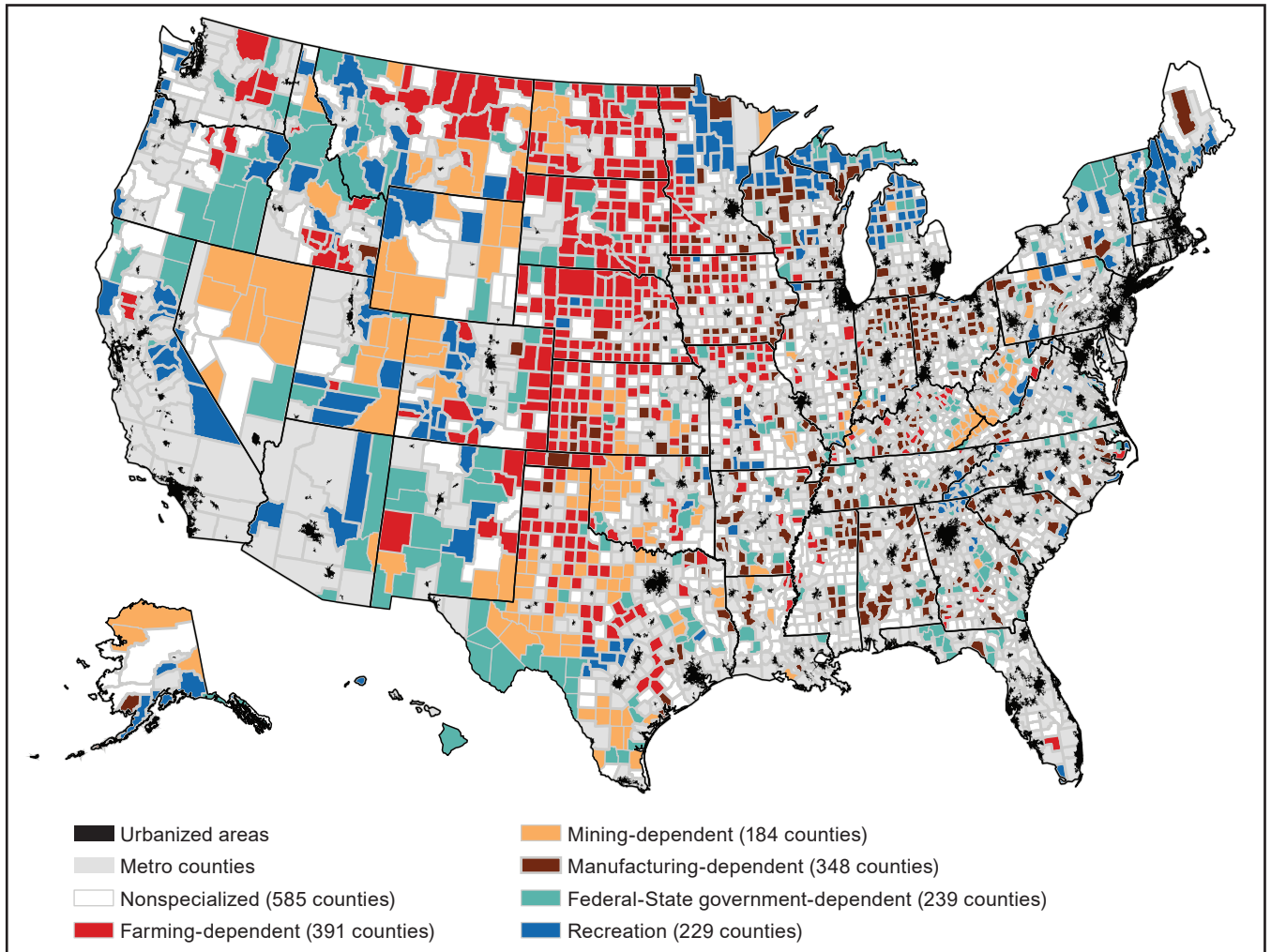


Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, Population Estimates Program.



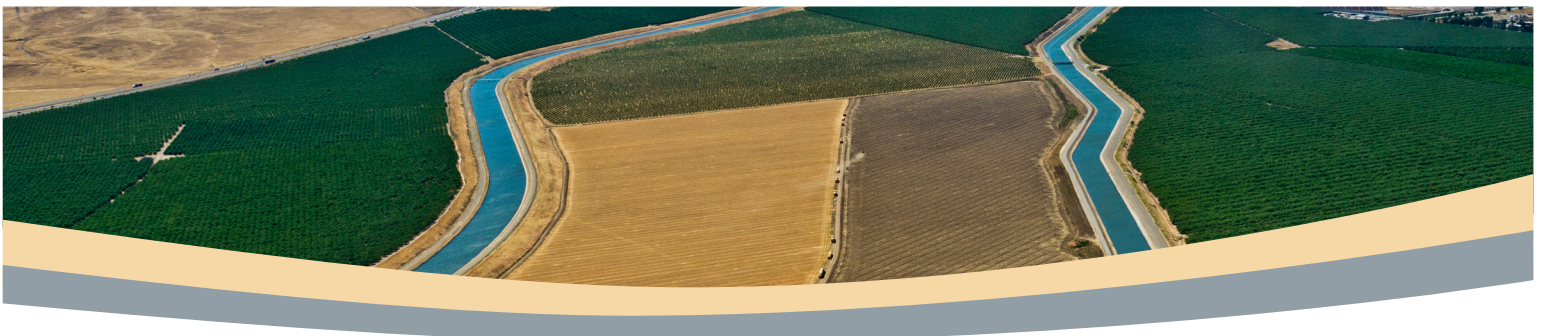
Rural areas vary in the industries that underpin their economies.

ERS county economic typology, 2015



Note: The 2015 county typologies use data from 2010-12.

Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of Economic Analysis.

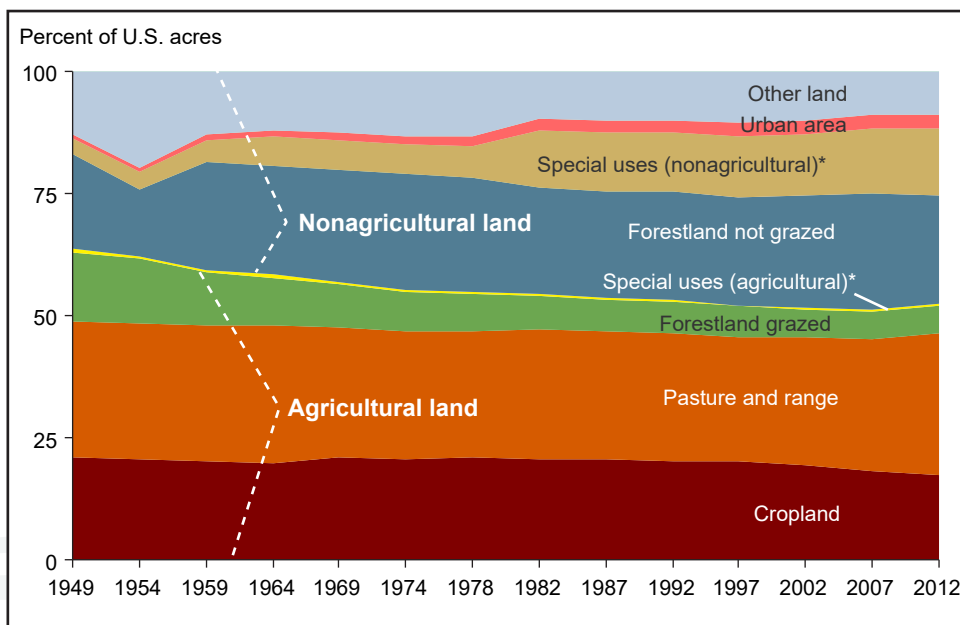


LAND AND NATURAL RESOURCES

U.S. agricultural production relies heavily on the Nation's land, water, and other natural resources, and has a direct impact on the quality of the natural environment.

Agricultural production is a major use of land, accounting for over half of the U.S. land base.

Major land uses in the United States, 1949-2012

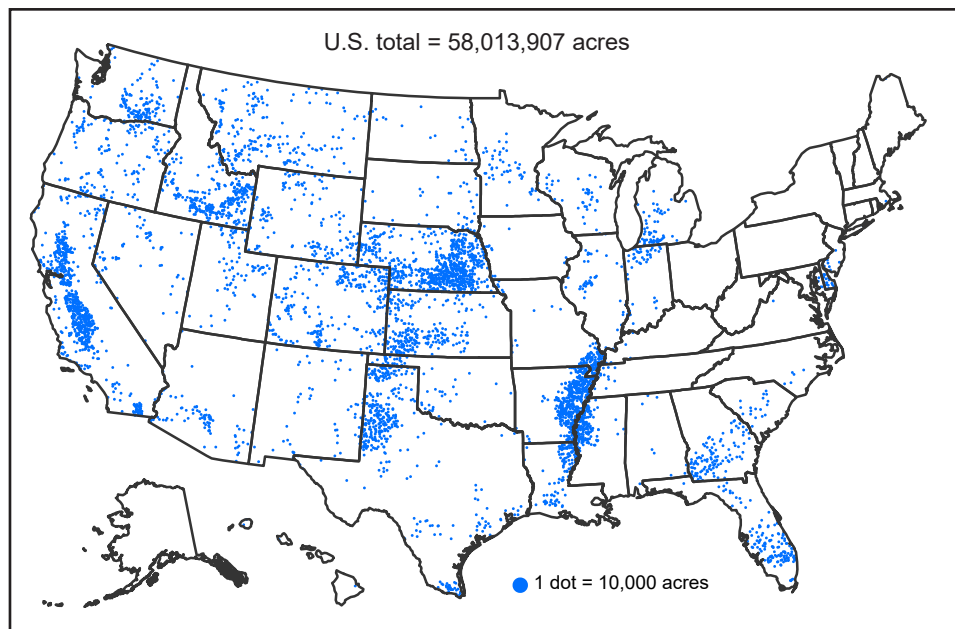


*Nonagricultural special uses include rural parks and wilderness areas, rural transportation areas, and defense/industrial lands. Agricultural special uses include farmsteads and farm roads.
 Source: USDA, Economic Research Service using data from the Major Land Uses series.



Five States—Nebraska, California, Arkansas, Texas, and Idaho—account for just over half of the Nation’s irrigated acres.

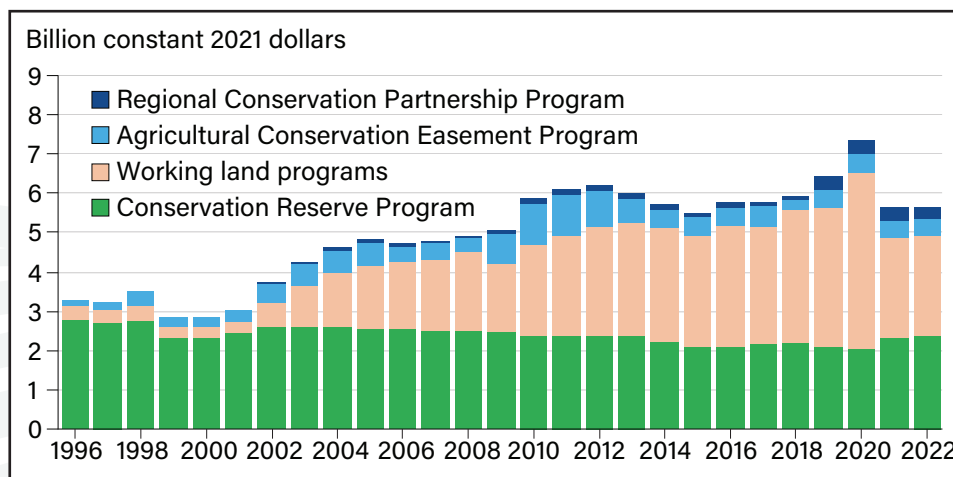
Acres of irrigated land, 2017



Source: USDA, National Agricultural Statistics Service, Map Atlases for the 2017 Census of Agriculture.

USDA’s funding for major working lands conservation programs has more than doubled over the past 25 years while funding for the Conservation Reserve Program has stayed fairly constant.

Major USDA conservation program expenditures, fiscal years 1996–2022



Note: Working land programs include the Environmental Quality Incentives Program, the Conservation Stewardship Program (CSP), program-related technical assistance, and predecessor programs. Predecessors of the Agricultural Conservation Easement Program include the Wetlands Reserve Program, Farmland Protection Program, and part of the Grassland Reserve Program. CSP expenditures in 2019 and 2020 reflect obligations under CSP contracts signed prior to the 2018 Farm Act that had originally been budgeted as ongoing obligations during the term of the contract. Data for 2022 reflect enacted spending. Values adjusted to 2021 dollars using the Gross Domestic Product Implicit Price Deflator. Source: USDA, Economic Research Service using budget summary data from USDA, Office of Budget and Program Analysis.

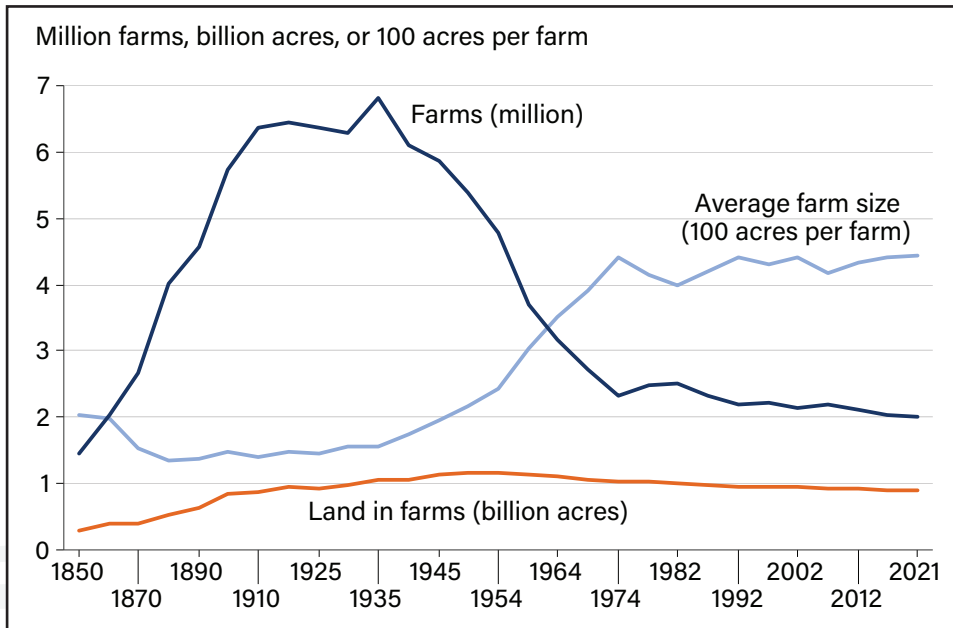


FARMING AND FARM INCOME

Early 20th century agriculture was labor intensive, and it took place on many small, diversified farms. Much of today's agricultural production takes place on large, specialized farms.

The number of farms has leveled off at about 2.01 million ...

Farms, land in farms, and average acres per farm, 1850–2021

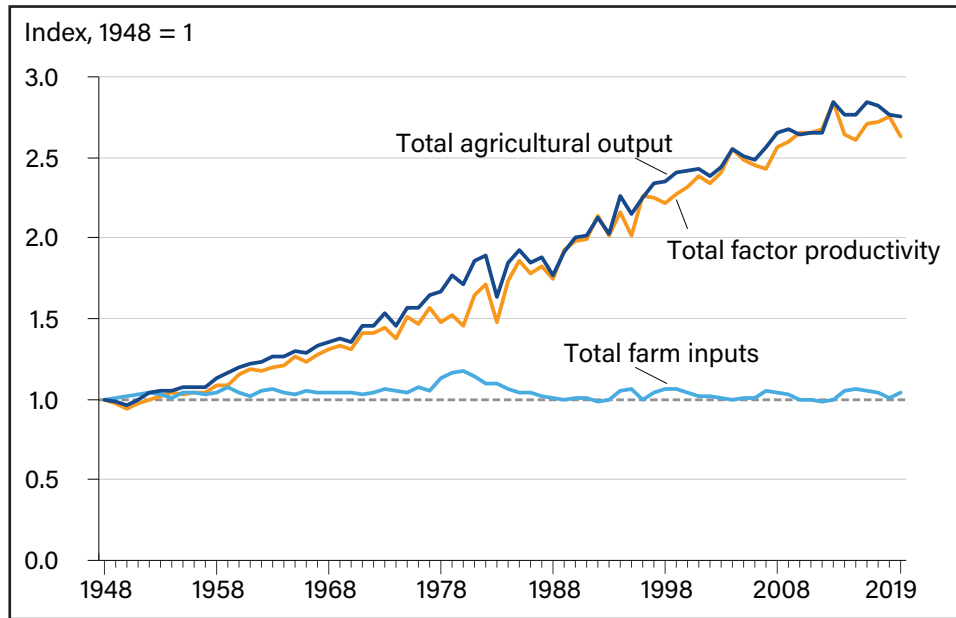


Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, Censuses of Agriculture (through 2017) and Farms and Land in Farms: 2021 Summary (February 2022).



... but agricultural output has grown, along with improvements in agricultural productivity.

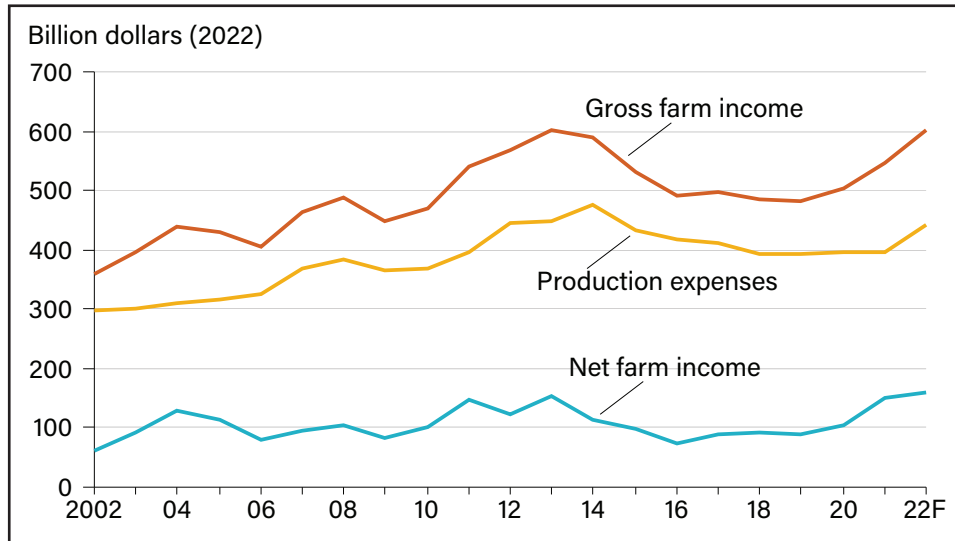
U.S. agricultural output, inputs, and total factor productivity, 1948–2019



Source: USDA, Economic Research Service, *Agricultural Productivity in the U.S.* data series. Data as of January 2022.

Net farm income has trended up since 2016...

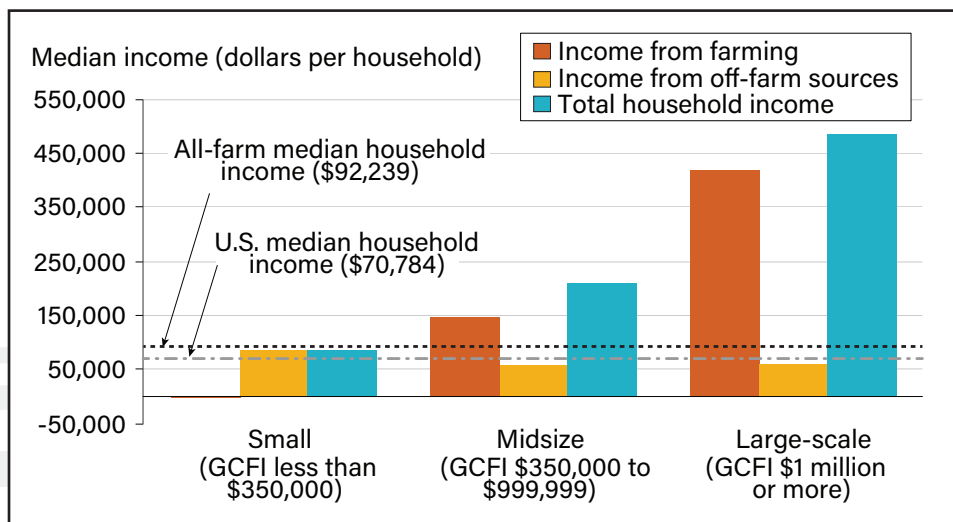
U.S. gross farm income, production expenses, and net farm income, 2002-22F



Note: F = forecast. Values are adjusted for inflation using the U.S. Bureau of Economic Analysis Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2022 by USDA, Economic Research Service.
 Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of December 1, 2022.

... while off-farm income continues to be important to total farm household income, especially among small-scale producers.

Median income of farm households, by income source and farm type, 2021



Note: Farm type reflects annual gross cash farm income (GCFI) which includes sales of crops and livestock, Government payments, and other farm-related income (including fees received by operators from production contracts).
 Sources: USDA, Economic Research Service and USDA, National Agricultural Statistics Service, Agricultural Resource Management Survey and U.S. Department of Commerce, Bureau of the Census, Current Population Reports (p60-276). Data as of December 1, 2022.

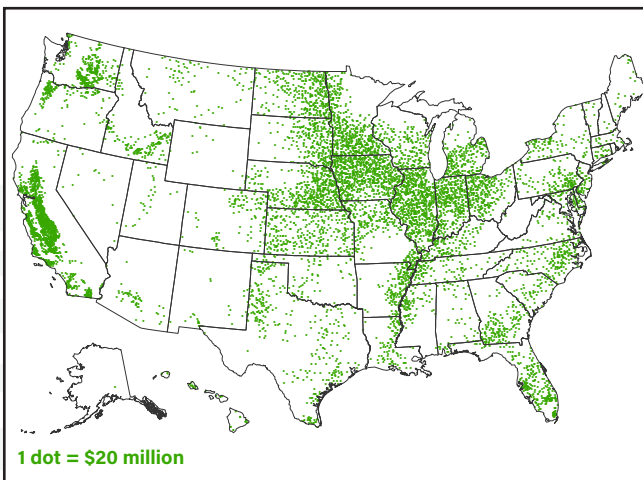


AGRICULTURAL PRODUCTION AND PRICES

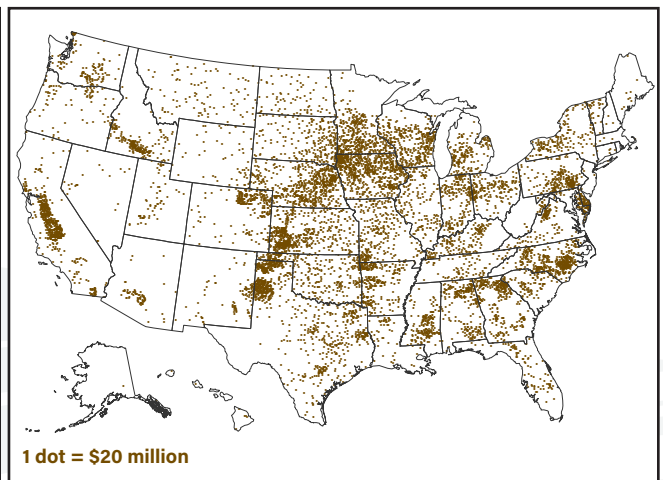
Markets for major agricultural commodities are typically analyzed by looking at supply-and-use conditions and the implications for prices. Many interactions and relationships exist between and among different commodities. For example, corn production and prices affect feed costs in the livestock sector.

U.S. crop production is concentrated in California and the Midwest, while livestock production is more spread out across the country.

Market value of crops sold in 2017



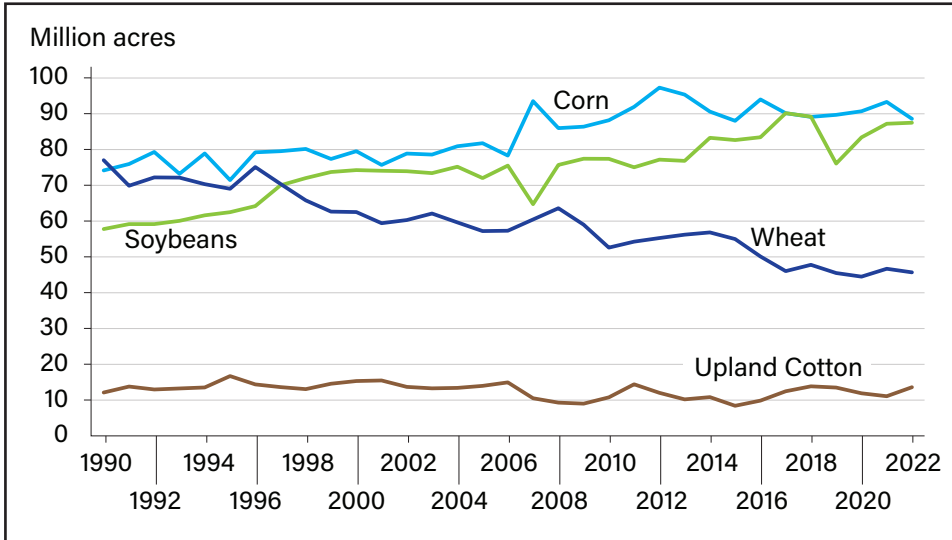
Market value of livestock, dairy, poultry, and their products sold in 2017



Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, 2017 Census of Agriculture.

Corn and soybean acreage has increased since 1990, while fewer acres are planted with wheat.

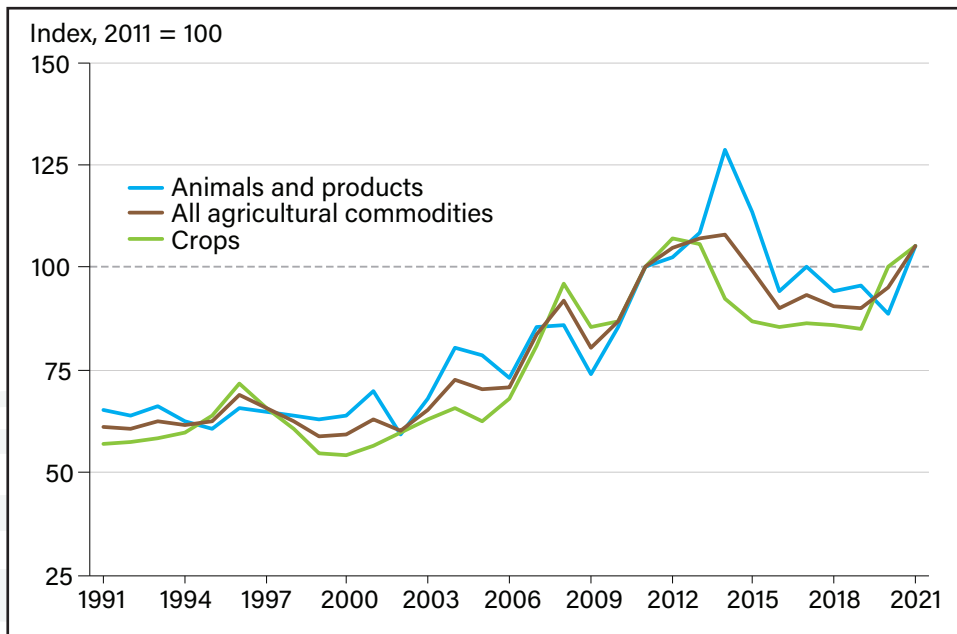
U.S. planted area: Corn, wheat, soybeans, and upland cotton, 1990-2022



Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service.

Agricultural prices trended upward in 2021 ...

U.S. prices received by farmers, 1991-2021

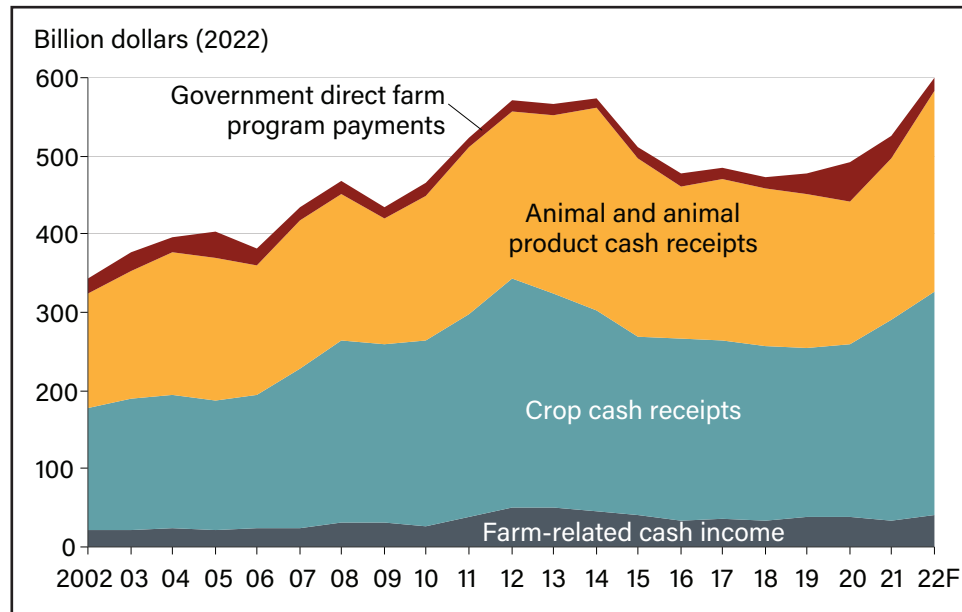


Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, *Agricultural Prices*.



... bringing crop and animal/animal product cash receipts higher as well.

Gross cash farm income components, inflation adjusted, 2002-22F



Note: F = forecast. Values are adjusted for inflation using the U.S. Bureau of Economic Analysis Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2022 by USDA, Economic Research Service.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of December 1, 2022.

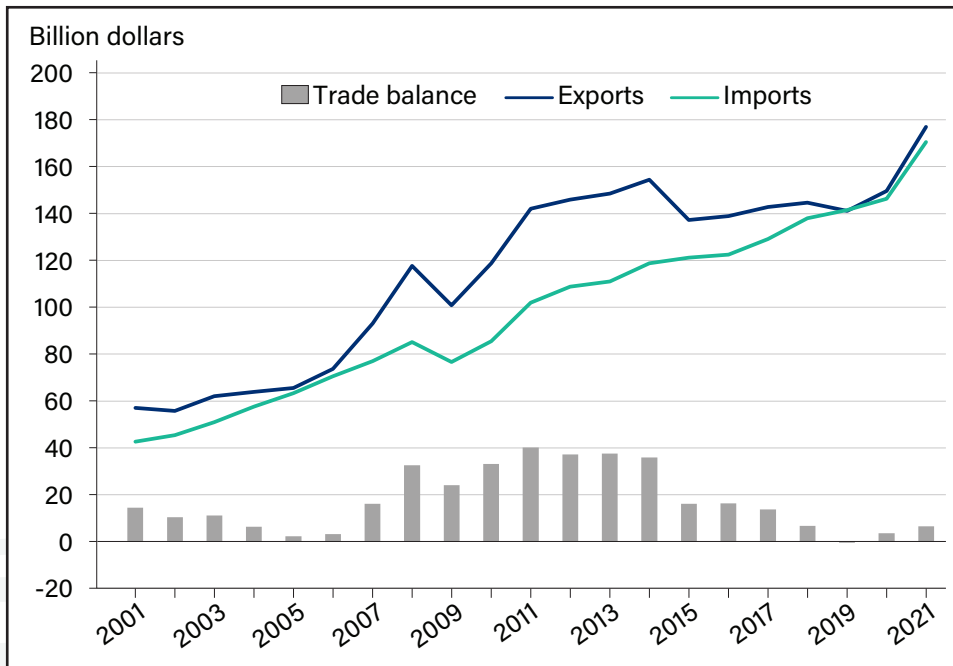


AGRICULTURAL TRADE

The leading U.S. agricultural exports are grains and feeds, soybeans, livestock products, tree nuts, fruits, vegetables, and other horticultural products. The leading U.S. imports are horticultural and tropical products. China, Mexico, Canada, Japan, and the European Union are major U.S. trade partners.

The United States typically exports more agricultural goods by value than it imports, but imports have grown more rapidly than exports over the past decade...

U.S. agricultural trade, 2001-21



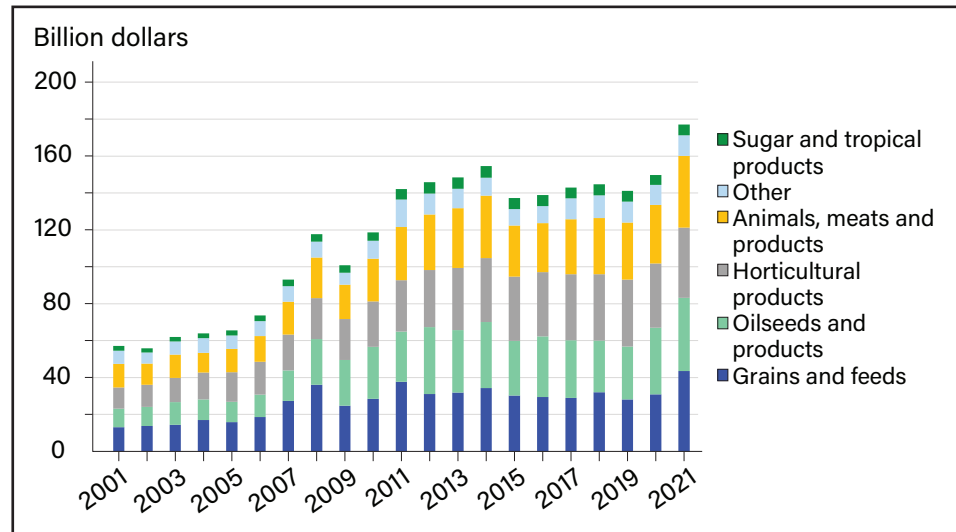
Note: Calendar year values in nominal U.S. dollars.

Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census.



... and the nominal value of U.S. agricultural exports showed strong growth in 2021, driven by gains in all major commodity groups, with the largest gains in grains and feeds.

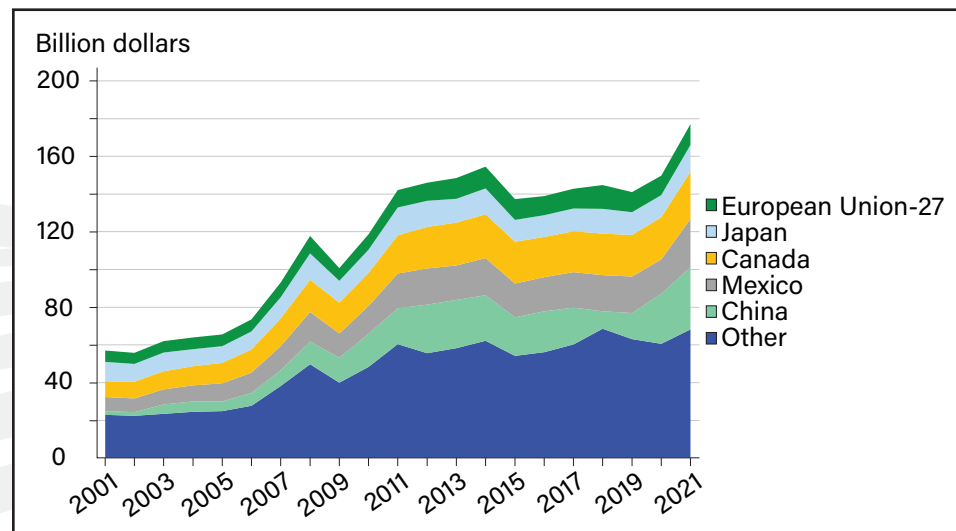
U.S. agricultural exports, 2001-21



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census.

China, Mexico, and Canada were top destinations for U.S. agricultural exports in 2021.

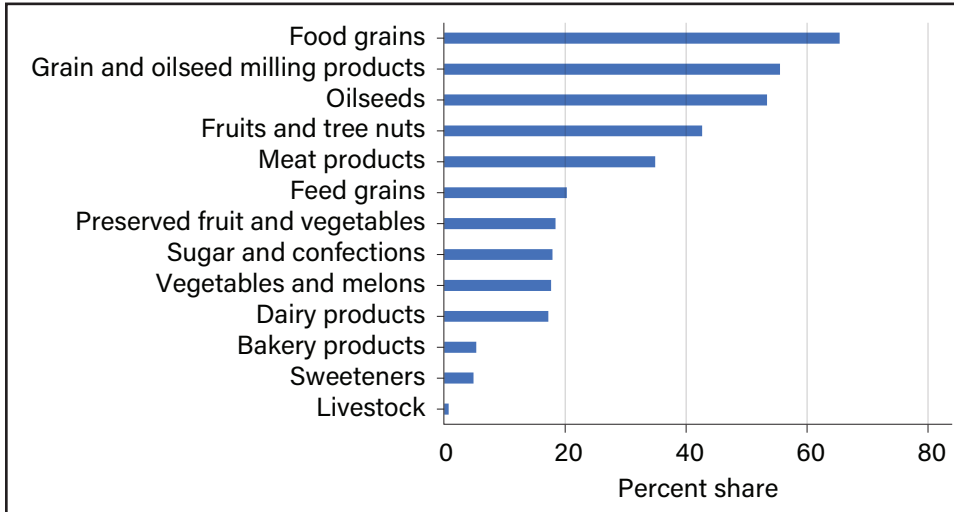
Top five markets for U.S. agricultural exports, 2001-21



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census.

Overseas customers account for 40 percent or more of the total market for U.S. fruits and tree nuts, oilseeds, and food grains such as rice and wheat.

Export value share of production, 2011-21



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census.



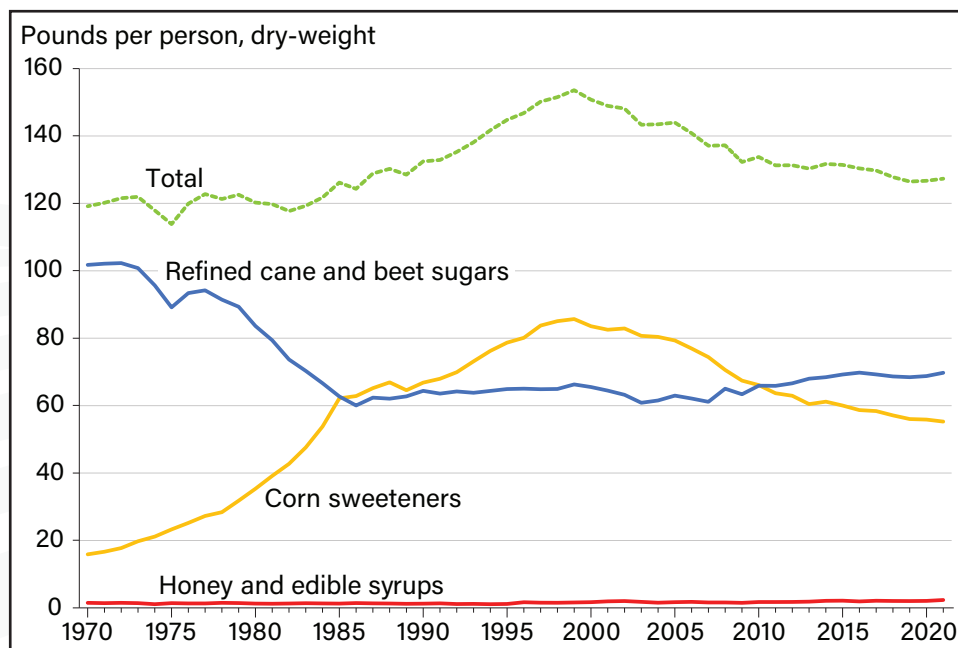
FOOD CONSUMPTION AND AVAILABILITY

ERS's Food Availability data estimate the amount of food available for human consumption in the United States by measuring the supply of foods moving through the U.S. marketing system. A second data series—Loss-Adjusted Food Availability—adjusts for losses from farmgate to fork—such as damaged products, spoilage, and plate waste—to more closely approximate actual consumption.

Food availability data track changes in U.S. diets over time.

Per capita availability of caloric sweeteners in the U.S. trended down over the last 2 decades—led by a steady decline in corn sweeteners consumption...

U.S. per capita caloric sweetener availability, 1970-2021

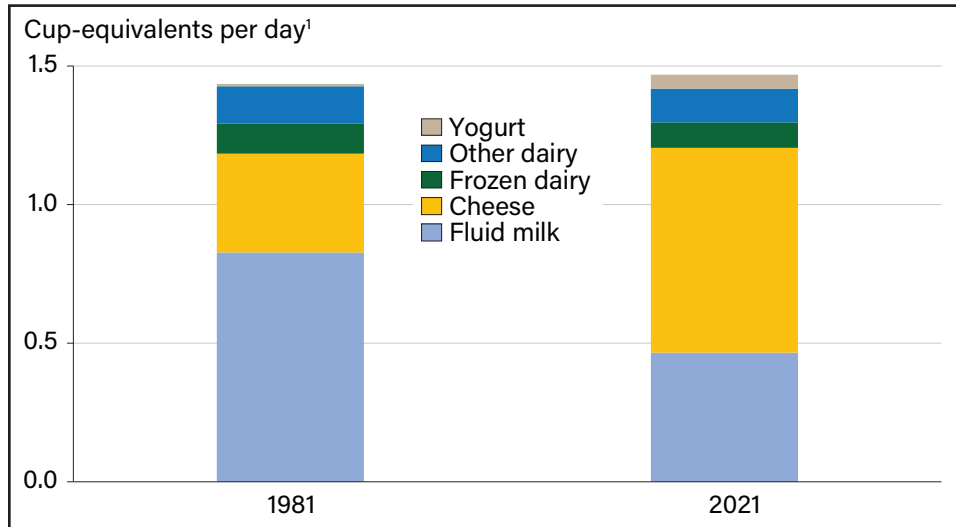


Note: Corn sweeteners include high-fructose corn syrup (HFCS), glucose syrup, and dextrose. Edible syrups include sorgo (sweet sorghum), maple and sugarcane syrup, edible molasses, and edible refiners' syrup.

Source: USDA, Economic Research Service, Food Availability Data.

...while the mix of dairy products available for U.S. consumption after adjusting for losses shifted to include more cheese and less fluid milk ...

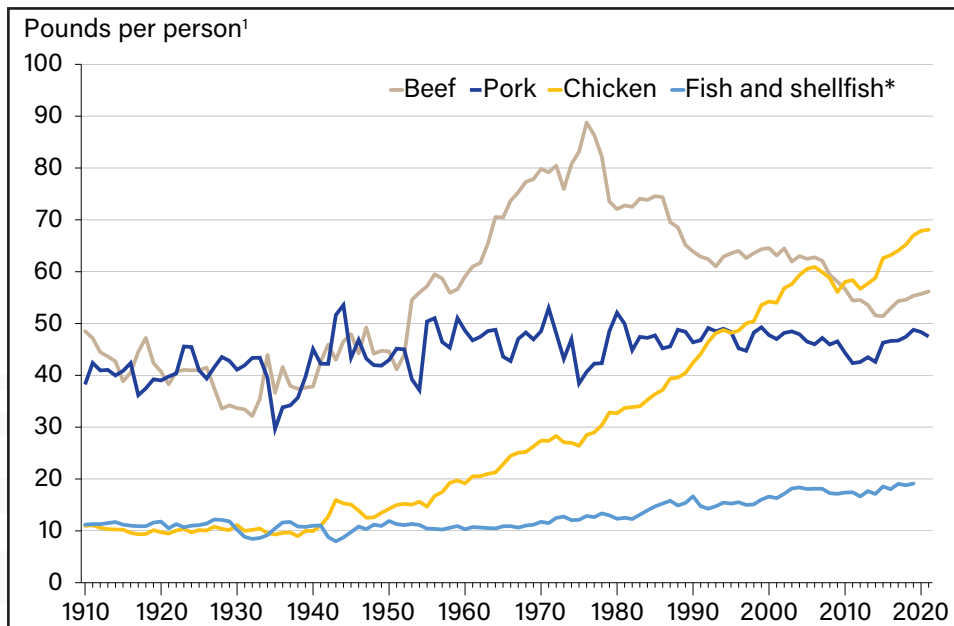
U.S. per capita loss-adjusted availability of dairy products, 1981 and 2021



¹One cup-equivalent for dairy is: 1 cup milk or yogurt; 1½ ounces natural cheese or 2 ounces of processed cheese or 1/3 cup shredded cheese; 1 cup frozen yogurt or 1½ cups ice cream; 2 cups cottage cheese. Note: Loss-adjusted food availability data are proxies for consumption. "Other dairy" includes evaporated milk, condensed milk, dry milk products, cottage cheese, and half and half. Half and half data were discontinued in 2002 and are not included in "Other dairy" for 2021. Source: USDA, Economic Research Service, Loss-Adjusted Food Availability Data.

... and per capita availability of red meat, poultry, and seafood varied over time ...

U.S. per capita availability of beef, pork, chicken, and fish/shellfish, 1910-2021



¹Calculated on the basis of raw and edible meat in boneless, trimmed (edible) weight. Excludes edible offals, bones, viscera, and game from red meat. Includes skin, neck, and giblets from chicken. Excludes use of chicken for commercially prepared pet food.

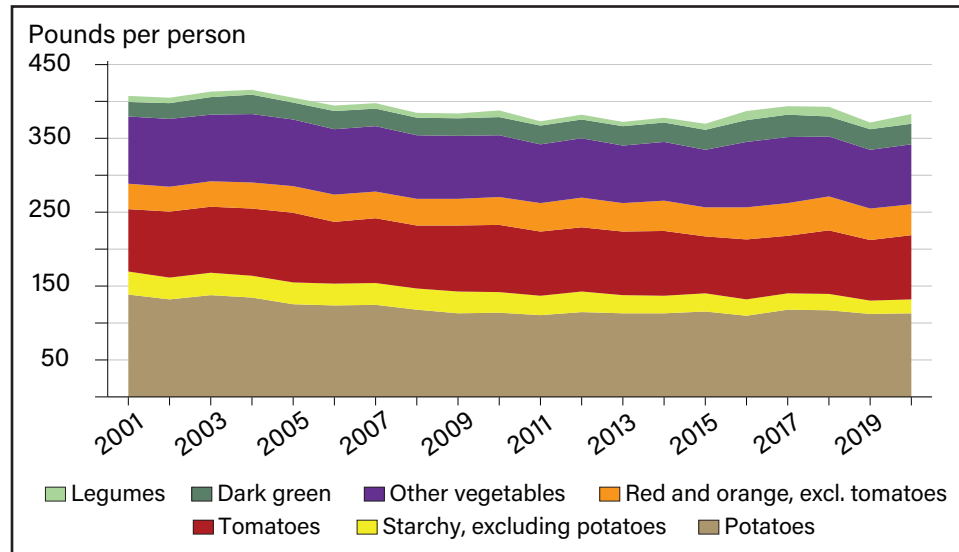
*Fish and shellfish data are only available through 2019.

Source: USDA, Economic Research Service, Food Availability Data.



... with a variety of vegetables available for consumption.

U.S. per capita vegetable availability, 2001-20



Note: **Legumes:** dry edible beans, dry peas. **Dark green:** broccoli, collard greens, escarole, kale, mustard greens, romaine and leaf lettuce, spinach, turnip greens. **Other vegetables:** artichokes, asparagus, beets, brussels sprouts, cabbage, cauliflower, celery, cucumbers, eggplant, garlic, head lettuce, okra, onions, radishes, snap beans, squash. **Red and orange, excluding tomatoes:** bell peppers, carrots, chili peppers, pumpkin, sweet potatoes. **Starchy, excluding potatoes:** green peas, lima beans, sweet corn.

Source: USDA, Economic Research Service, Food Availability Data.

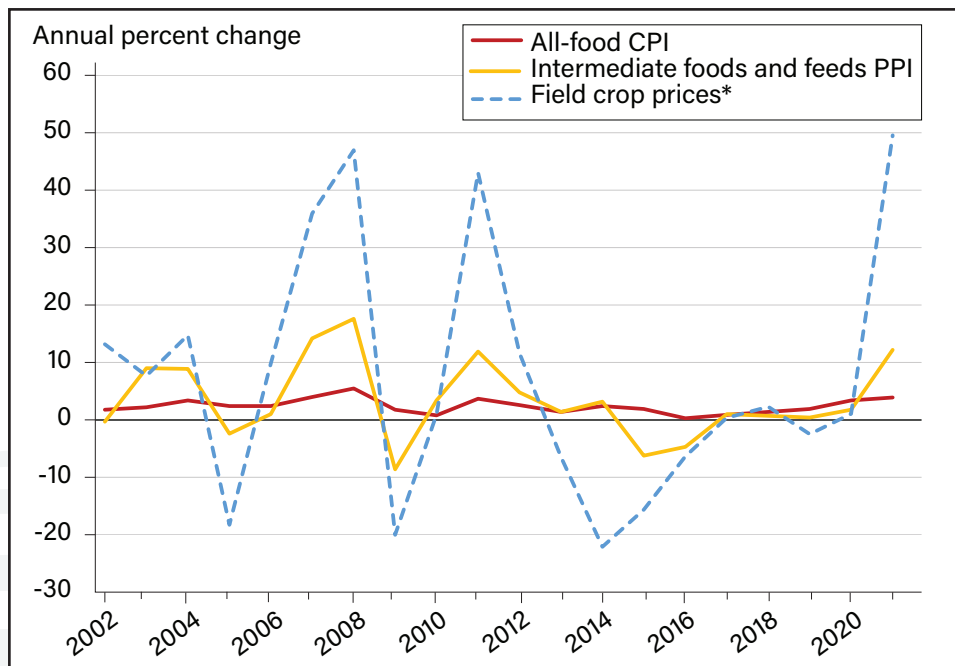


FOOD PRICES AND SPENDING

Retail food prices partially reflect farm-level commodity prices, but packaging, processing, transportation, and other marketing costs—along with competitive factors—have a greater role in determining prices on supermarket shelves and restaurant menus.

Even large swings in farm commodity prices result in modest changes in food prices ...

Change in all-food CPI, intermediate foods and feeds PPI, and field crop prices, 2002-21



*Calendar year production-weighted average for corn, wheat, and soybeans.

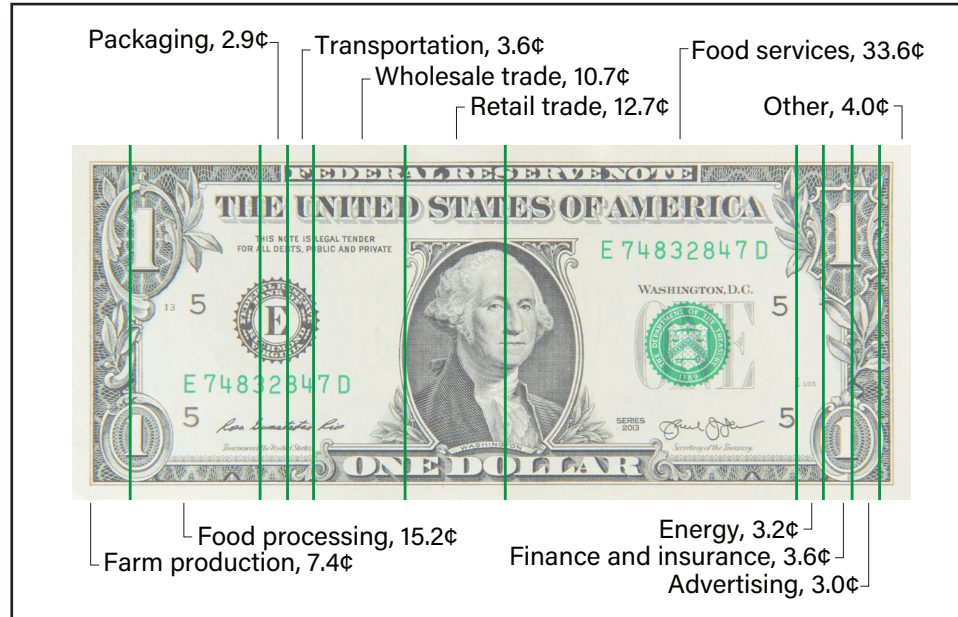
Note: PPI = Producer Price Index, CPI = Consumer Price Index.

Source: USDA, Economic Research Service using USDA, National Agricultural Statistics Service data; and U.S. Department of Labor, Bureau of Labor Statistics data.



... as much of U.S. consumers' retail food dollar pays for processing, retailing, and foodservice costs.

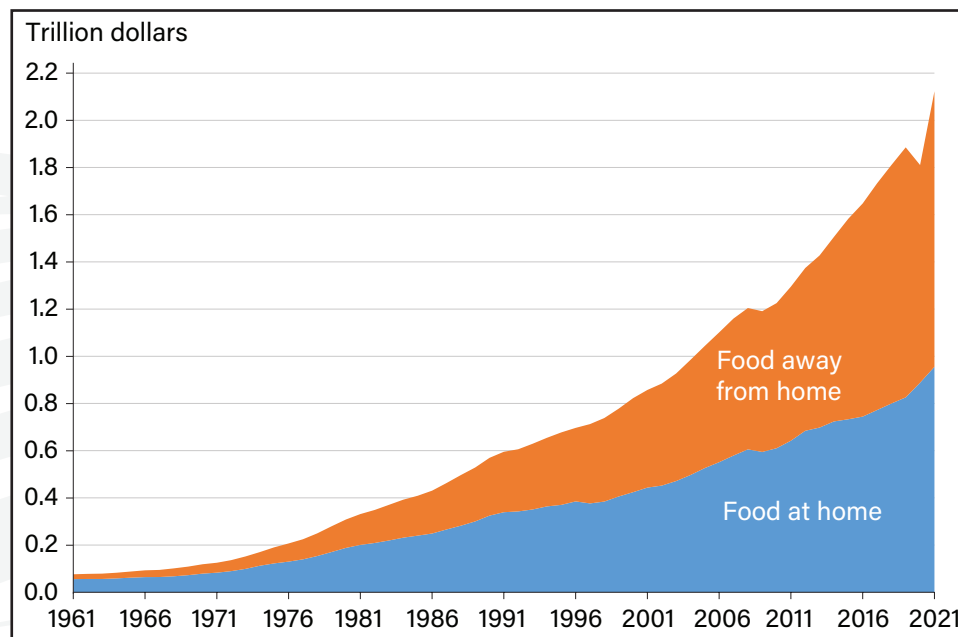
2021 nominal food dollar by industry group



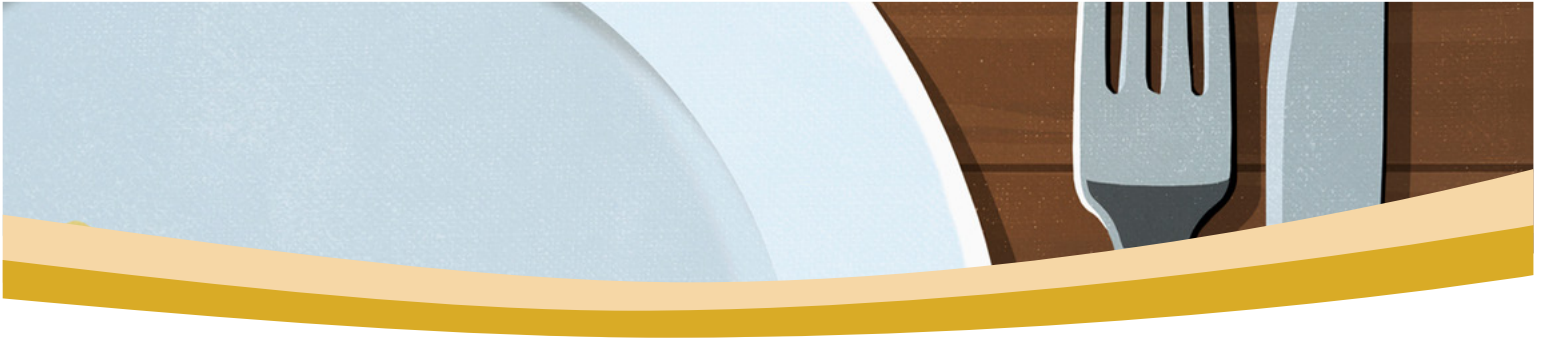
Note: Other includes agribusiness (2.2 cents) and legal and accounting (1.8 cents).
Source: USDA, Economic Research Service, Food Dollar Series.

Spending on food-away-from-home continued to outpace food-at-home spending in 2021.

Food-at-home and food-away-from-home expenditures in the United States, 1961-2021



Note: Values are in nominal dollars.
Source: USDA, Economic Research Service, Food Expenditure Series.

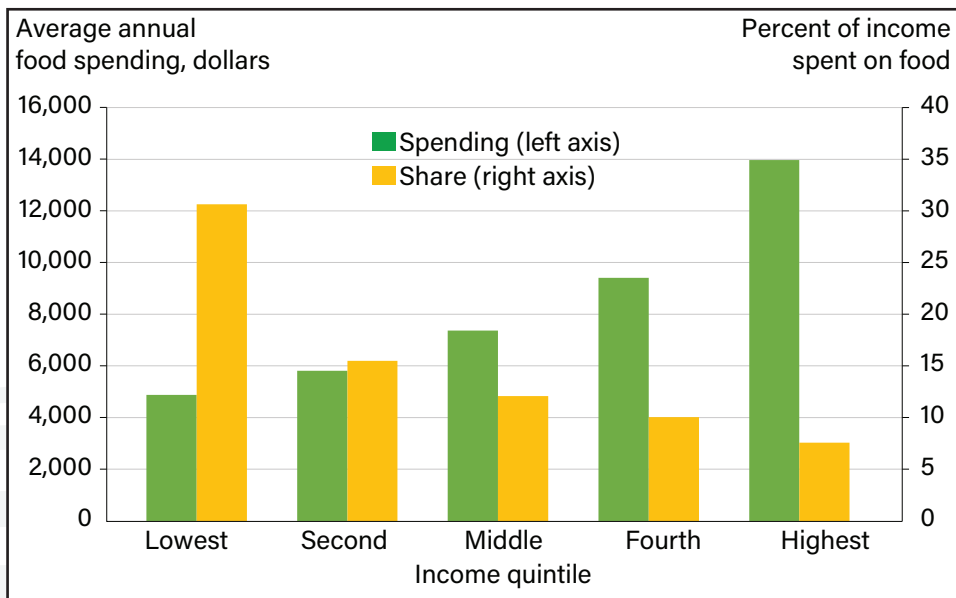


FOOD SECURITY AND NUTRITION ASSISTANCE

ERS monitors the food security of U.S. households through an annual, nationally representative survey. While most U.S. households are *food secure*, a minority of U.S. households are *food insecure*—they struggle to afford enough food for all household members. Some experience the more severe *very low food security*, where food intake of one or more members is reduced and normal eating patterns are disrupted.

U.S. households in the middle-income quintile spend about 12 percent of their incomes on food, but the lowest-income families spend just over 30 percent.

Food spending and share of income spent on food across U.S. households, 2021

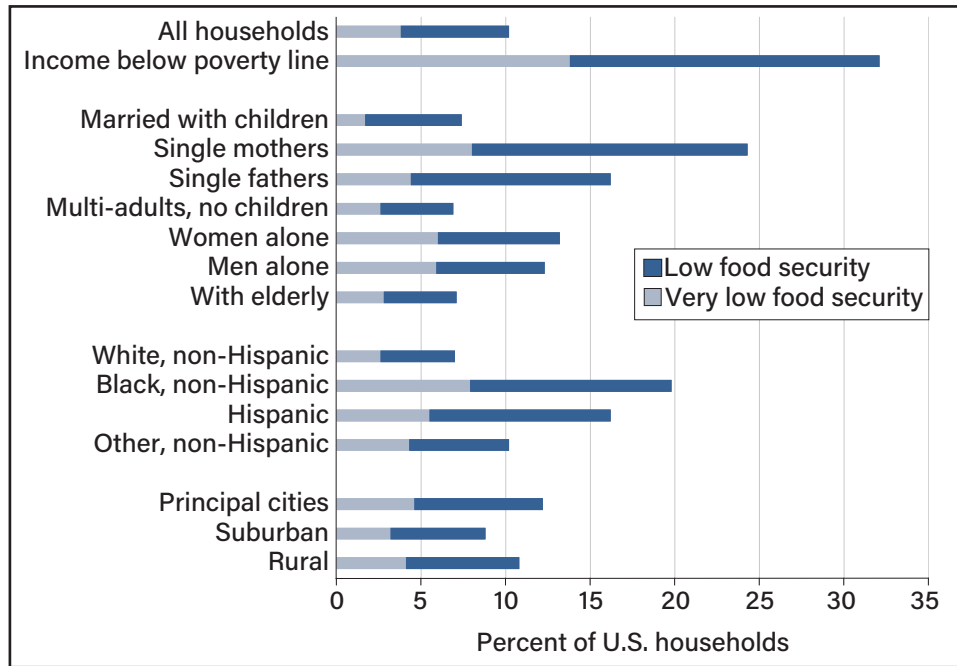


Source: USDA, Economic Research Service using U.S. Department of Labor, Bureau of Labor Statistics, 2021 Consumer Expenditure Survey data.



Some of these families may find themselves facing food insecurity...

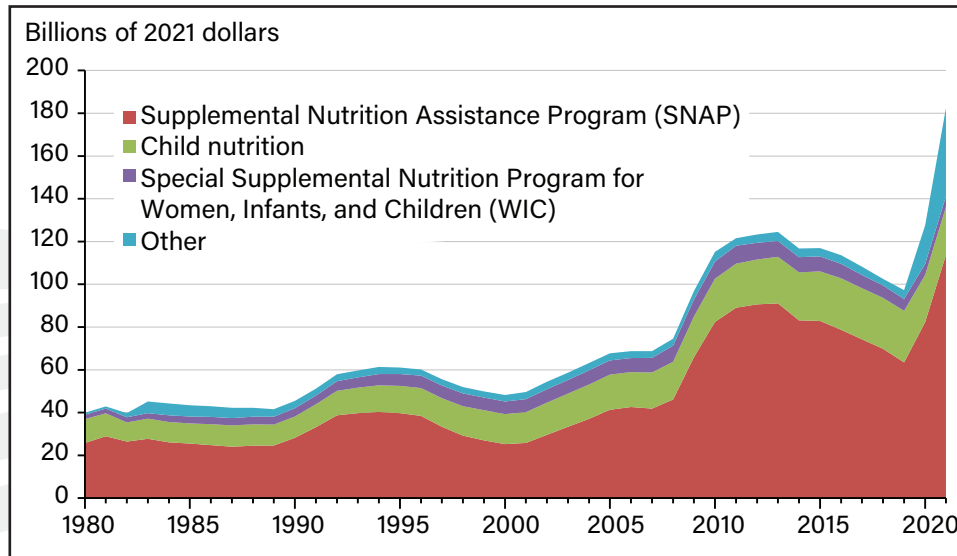
Prevalence of food insecurity by selected household characteristics, 2021



Note: Food-insecure households include those with low food security and very low food security. Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, 2021 Current Population Survey Food Security Supplement.

... and seek support from USDA's food and nutrition assistance programs.

Inflation-adjusted spending on USDA food and nutrition assistance programs, fiscal years 1980-2021

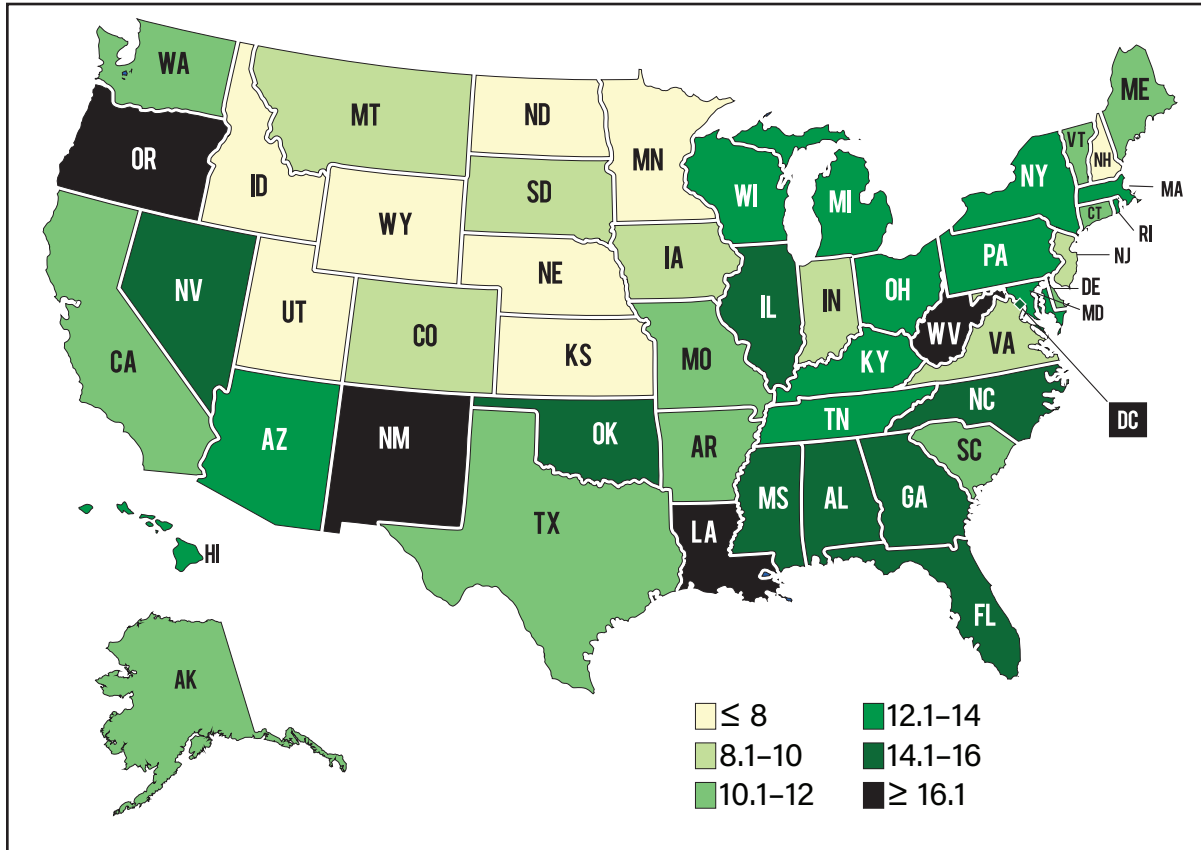


Note: **Child nutrition** includes the National School Lunch Program (NSLP), School Breakfast Program (SBP), Child and Adult Care Food Program, Summer Food Service Program, and Special Milk Program; it does not include State administrative expenses. **Other** includes spending not elsewhere classified, including Pandemic Electronic Benefit Transfer and the Farmers to Families Food Box Program in 2020-21 and meals served through the NSLP/SBP Seamless Summer Option in Q4 of 2021. Inflation adjusted using the Personal Consumption Expenditures Price Index. Data are as of April 2022 and subject to revision.

Source: USDA, Economic Research Service using data from USDA, Food and Nutrition Service and USDA, Agricultural Marketing Service.

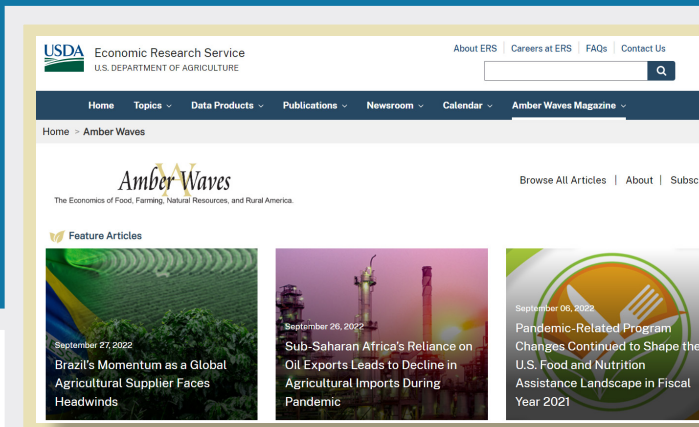
Participation in SNAP—the largest of these assistance programs—varies across States, reflecting differences in need and program policies.

Percent of population receiving SNAP benefits in fiscal 2021



Note: SNAP = Supplemental Nutrition Assistance Program.
 Source: USDA, Economic Research Service using data from USDA, Food and Nutrition Service and U.S. Department of Commerce, Bureau of the Census.

Read ERS's *Amber Waves* magazine, Charts of Note, and the latest reports and data online, or have them delivered right to your email!

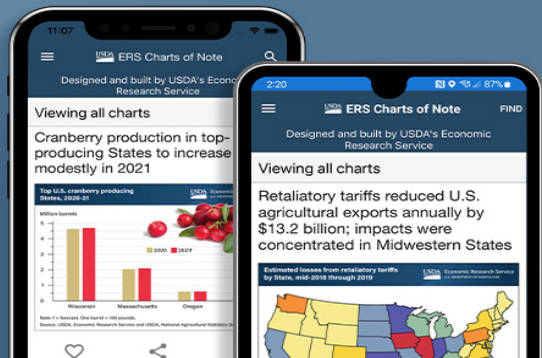


Amber Waves
The Economics of Food, Farming,
Natural Resources, and Rural America



CHARTS of NOTE

Mobile app available on Apple
and Android devices.



Sign up at www.ers.usda.gov/updates to receive ERS's email notifications, including *Amber Waves*, Charts of Note, and our latest reports or data of interest.

www.ers.usda.gov

USDA is an equal opportunity provider, employer, and lender.